

# **IBM Data Science Capstone Project Week4**

## **Introduction**

This capstone project is part of the requirements to successfully completing the IBM Data Science Professional Certificate. In this project, I am going to focus on Toronto, Canada, where I am going to use all what I have learned throughout this course to suggest suitable locations for a Japanese restaurant based on geographical locations only. Assume that the demand for Japanese cuisines is rising in Toronto, and it becomes a battle of location for prospective Japanese restaurants. I am going to leverage on the Foursquare API to get location data in order to suggest possible gold mine locations for a client who wants to open a Japanese restaurant.

## **Business Problem**

The aim of this project is to suggest suitable locations for a Japanese restaurant in Toronto, Canada. A lot of data science tools and techniques are going to be used along with different machine learning techniques such as clustering. All these are put in place in order to answer the business problem:

Where would a potential Japanese restaurant owner consider setting up shop in Toronto, Canada?

## **Target Audience**

In this project, the target audience is an interested potential restaurant owner who wants to open a Japanese restaurant in Toronto, Canada. From the assumption made above, this exercise will predict a good location where it would be easiest to establish a good customer base and patronisers for the restaurant. This will definitely be of interest to the stakeholder.

## **Data to be used**

In this project, we will need the following data:

1. A list of neighbourhoods in Toronto, Canada
2. Geographic coordinates of these neighbourhoods (longitudes and latitudes)
3. Venue data of Japanese related restaurants in Toronto.

## **Acquiring the data**

The list of neighbourhoods will be scrapped from the Wikipedia page of Neighbourhoods in Canada.

[https://en.wikipedia.org/wiki/List\\_of\\_postal\\_codes\\_of\\_Canada:\\_M](https://en.wikipedia.org/wiki/List_of_postal_codes_of_Canada:_M),

The geographical coordinates of each neighbourhood will be downloaded from the following link,

<http://geoawesomeness.com/developers-up-in-arms-over-google-maps-api-insane-price-hike/>,

I have also ensured that this data is authentic.

The Foursquare API will be used to get information on the Japanese related restaurants in Toronto.